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REMARKS

Claims 1, 12, and 20 have been amended. Claims 1 through 20 remain in the application. A marked up copy of the amended claims are attached hereto as Appendix A.

Claims 1 through 5, 11, 12, and 18 through 20 were rejected under 35 U.S.C. § 102(e) as being anticipated by Richmond (U.S. Patent No. 6,095,359). Claims 12, 18, and 20 were rejected under 35 U.S.C. § 102(e) as being anticipated by Toyo Seikan Kaisha Ltd. (TOXO) (Japanese Patent No. 61-232162). Claims 1, 5, and 11 were rejected under 35 U.S.C. § 102(b) as being anticipated by Duhaime et al. (U.S. Patent No. 5,425,470). Applicants respectfully traverse all of these rejections.

U.S. Patent No. 6,095,359 to Richmond discloses a molded plastic container closure with fully embedded barrier. A closure 1 includes a molded cap 3 having an end wall 5 and skirt 7 extending axially around the periphery of the end wall 5. An inner surface 9 of the skirt 7 is provided with container engagement members such as threads 11. The cap 3 with its integral end wall 5 and skirt 7 is co-injected with a barrier member 13. This barrier member 13 extends across the end wall 5. The barrier member 13 is molded of a material which is substantially impermeable to gases such as air and separately nitrogen, oxygen and carbon dioxide. Examples of suitable barrier materials are: polyvinylidene chloride copolymer (PVDC), ethylene vinyl alcohol copolymer (EVOH), ethylene vinyl acetate (EVA), and nylon. Richmond does not disclose a fuel permeation barrier layer attached to a fuel module cover to retard permeation of fuel through the cover.

Japanese Patent No. 61-232162 to Toyo Seikan Kaisha Ltd. (TOXO) discloses a multi-layer plastic cap molding. A plastic cap is molded of a composition consisting of a moisture-resistant resin (e.g., PP, PE, polyethylene terephthalate, etc.) and a gas-barrier resin (e.g., ethylene-vinyl alcohol copolymer, etc.) by co-injection molding method, having a skirt

portion for coupling of the top plate and the opening of the container. The inner and outer surfaces of the top plate and the skirt are made of the moisture-resistant resin and the gas-barrier resin layer is completely confined in the moisture-resistant layer in the form of an intermediate layer covering the whole face of the top plate portion at least. In this case, the gas-barrier resin layer is present toward the inside rather than the center of the thickness of the top plate. Japanese does not disclose a fuel permeation barrier layer attached to a fuel module cover to retard permeation of fuel through the cover.

U.S. Patent No. 5,425,470 to Duhaime et al. discloses a fuel tank closure. A closure plug 42 is within an opening 40. Closure plug 42 includes an inner layer 44, outer layer 46, and barrier layer 48 therebetween. The barrier layer 48 is made from a similar material as barrier layer 24. Suitable material for barrier layer 24 includes ethylene vinyl alcohol (EVOH), nylon and acetel. Duhaime et al. does not disclose a fuel permeation barrier layer attached to a fuel module cover to retard permeation of fuel through the cover.

In contradistinction, claim 1, as amended, clarifies the invention claimed as a permeation barrier fuel module cover assembly for a fuel tank of a vehicle including a cover for a fuel module. The permeation barrier fuel module cover assembly also includes a fuel permeation barrier layer attached to the cover to retard permeation of fuel through the cover. Claims 12 and 20 have been amended similar to claim 1 and include other features of the present invention.

A rejection grounded on anticipation under 35 U.S.C. § 102 is proper only where the subject matter claimed is identically disclosed or described in a reference. In other words, anticipation requires the presence of a single prior art reference which discloses each and every element of the claimed invention arranged as in the claim. In re Arkley, 455 F.2d 586, 172 U.S.P.Q. 524 (C.C.P.A. 1972); Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 218 U.S.P.Q.

781 (Fed. Cir. 1983); Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co., 730 F.2d 1452, 221 U.S.P.Q. 481 (Fed. Cir. 1984).

None of the references cited disclose or anticipate the claimed invention of claims 1, 12, and 20. Specifically, Richmond '359 merely discloses a molded plastic container closure with fully embedded barrier having a cap with an integral end wall and skirt co-injected with a barrier member. Richmond '359 lacks a fuel permeation barrier layer attached to a fuel module cover to retard permeation of fuel through the cover. Japanese '162 merely discloses a multi-layer plastic cap molded of a composition consisting of a moisture-resistant resin and a gas-barrier resin by co-injection molding method, having a skirt portion for coupling of the top plate and the opening of the container. Japanese '162 lacks a fuel permeation barrier layer attached to a fuel module cover to retard permeation of fuel through the cover. Duhaime et al '470 merely discloses a fuel tank closure having an inner layer, outer layer, and barrier layer therebetween. Duhaime et al. '470 lacks a fuel permeation barrier layer attached to a fuel module cover to retard permeation of fuel through the cover. Each of the references fails to disclose the combination of a permeation barrier fuel module cover assembly including a fuel permeation barrier layer attached to a fuel module cover to retard permeation of fuel through the cover as claimed by Applicants. Therefore, it is respectfully submitted that claims 1, 12, and 20 and the claims dependent therefrom are allowable over all the rejections under 35 U.S.C. § 102.

Claims 9 and 13 were rejected under 35 U.S.C. § 103 as being unpatentable over Richmond '359. Applicants respectfully traverse this rejection for the same reasons given above to claims 1 and 12.

Claim 13 was rejected under 35 U.S.C. § 103 as being unpatentable over Toyo Seikan Kaisha Ltd. (TOXO) '162. Applicants respectfully traverse this rejection for the same reasons given above to claim 12.

Claim 13 was rejected under 35 U.S.C. § 103 as being unpatentable over Duhaime et al. '470. Applicants respectfully traverse this rejection for the same reasons given above to claim 12.

Claims 1 and 6 through 19 were rejected under 35 U.S.C. § 103 as being unpatentable over Neal et al. (U.S. Patent No. 5,660,206) in view of Richmond '359. Applicants respectfully traverse this rejection.

U.S. Patent No. 5,660,206 to Neal et al. discloses a fuel tank filler neck check valve. A vehicle fuel tank 20 has fuel pump module 22 therein with a removable cover 23 sealed to the top of the tank with an electrical connection 24 and a fuel line outlet connector 26. The fuel tank 20 is formed of a laminated polyethylene material 60 (with an embedded vapor barrier film) and has an integral upstanding threaded fill spout 62. Neal et al. does not disclose a fuel permeation barrier layer attached to a fuel module cover to retard permeation of fuel through the cover.

The United States Court of Appeals for the Federal Circuit (CAFC) has stated in determining the propriety of a rejection under 35 U.S.C. § 103, it is well settled that the obviousness of an invention cannot be established by combining the teachings of the prior art absent some teaching, suggestion or incentive supporting the combination. See In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 227 U.S.P.Q. 657 (Fed. Cir. 1985); ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 221 U.S.P.Q. 929 (Fed. Cir. 1984). The law followed by our court of review and the Board of Patent Appeals and Interferences is that “[a] prima facie case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art.” In re Rinehart, 531 F.2d 1048, 1051, 189 U.S.P.Q. 143, 147 (C.C.P.A. 1976). See also In re Lalu, 747 F.2d 703,

705, 223 U.S.P.Q. 1257, 1258 (Fed. Cir. 1984) (“In determining whether a case of prima facie obviousness exists, it is necessary to ascertain whether the prior art teachings would appear to be sufficient to one of ordinary skill in the art to suggest making the claimed substitution or other modification.”)

None of the references cited, either alone or in combination with each other, teach or suggest the claimed invention of claims 1 and 12. Specifically, Richmond ‘359 merely discloses a molded plastic container closure with fully embedded barrier having a cap with an integral end wall and skirt co-injected with a barrier member. Richmond ‘359 lacks a fuel permeation barrier layer attached to a fuel module cover to retard permeation of fuel through the cover. Neal et al. ‘206 merely discloses a fuel tank filler neck check valve in which a vehicle fuel tank has fuel pump module therein with a removable cover sealed to the top of the tank with the fuel tank formed of a laminated polyethylene material (with an embedded vapor barrier film). Neal et al. ‘206 lacks a fuel permeation barrier layer attached to a fuel module cover to retard permeation of fuel through the cover. The references, if combinable, fail to teach or suggest the combination of a permeation barrier fuel module cover assembly including a fuel permeation barrier layer attached to a fuel module cover to retard permeation of fuel through the cover as claimed by Applicants. The claimed invention is novel and unobvious because the permeation barrier fuel module cover assembly uses a barrier layer, which provides for performance enhancement in permeation of polymer covers used on fuel modules by reducing the surface area through which hydrocarbons can escape. Therefore, it is respectfully submitted that claims 1 and 12 and the claims dependent therefrom are allowable over the rejection under 35 U.S.C. § 103.

Obviousness under § 103 is a legal conclusion based on factual evidence (In re Fine, 837 F.2d 1071, 1073, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988), and the subjective opinion of the Examiner as to what is or is not obvious, without evidence in support thereof, does not

suffice. Since the Examiner has not provided a sufficient factual basis, which is supportive of his/her position (see In re Warner, 379 F.2d 1011, 1017, 154 U.S.P.Q. 173, 178 (C.C.P.A. 1967), cert. denied, 389 U.S. 1057 (1968)), the rejection of claims 1 and 6 through 19 is improper. Therefore, it is respectfully submitted that claims 1 and 6 through 19 are allowable over the rejection under 35 U.S.C. § 103.

Based on the above, it is respectfully submitted that the claims are in a condition for allowance, which allowance is solicited.

Respectfully submitted,

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APPENDIX A

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VERSION OF THE CLAIMS WITH MARKINGS TO SHOW THE CHANGES

Please amend claims 1, 12, and 20 as follows:

1. (AMENDED) A permeation barrier fuel module cover assembly for a fuel tank of a vehicle comprising:

a cover for a fuel module; and

a fuel permeation barrier layer attached to said cover to retard permeation of fuel through said cover.

12. (AMENDED) A permeation barrier fuel module cover assembly for a fuel tank of a vehicle comprising:

a cover for a fuel module having a base wall and a skirt extending axially from said base wall; and

a fuel permeation barrier layer attached to said cover inside of said skirt to retard permeation of fuel through said cover.

20. (AMENDED) A permeation barrier fuel module cover assembly for a fuel tank of a vehicle comprising:

a fuel module cover having a base wall, a raised portion extending axially from said base wall, and a skirt extending axially from said base wall opposite said raised portion; and

a fuel permeation barrier layer disposed between said base wall and said raised portion inside of said skirt to retard permeation of fuel through said fuel module cover.